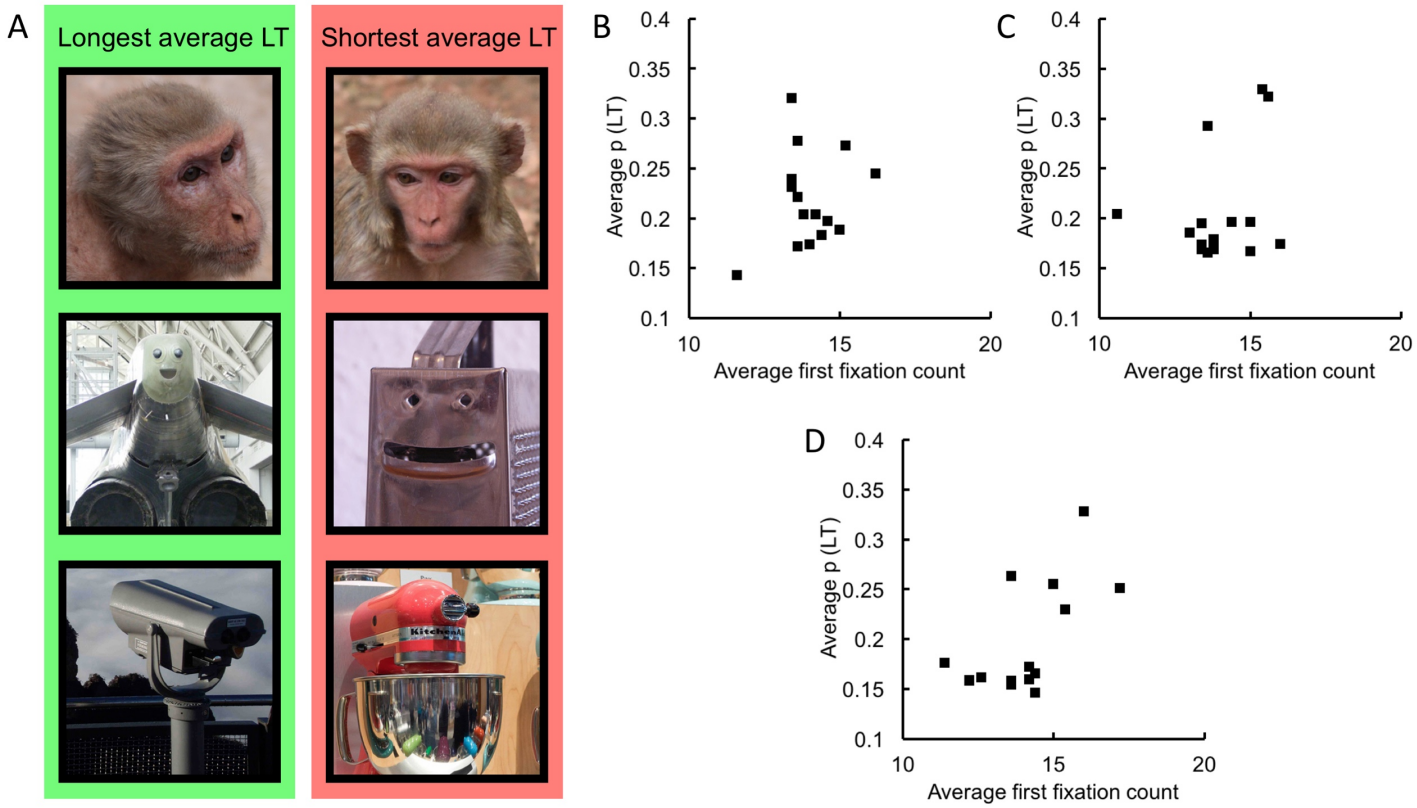

Figure S1. Experiment 1 Within Category Trials. Related to Figure 2.

(**A**). From top to bottom, the Monkey Face stimuli, the Illusory Face stimuli and the Nonface Objects that elicited the longest average LT (green column) and shortest average LT (red column) during within category trials. (**B**) We tested for a relationship between average proportion LT and first fixations in the monkey face trials. There was no evidence of a relationship between these dependent measures (Pearson's r =.23, P =.40). (**C**) Scatterplot depicting the relationship between LT and first fixation data for Illusory Faces pairs. There was no evidence of a relationship between these two dependent measures for illusory face stimuli (Pearson's r =.29, P =.29; Figure S1D). (**D**) For the Nonface Object within category trials there was evidence of a relationship between the average LT and first fixation measurements, implying that the non-face objects that captured spatial attention in the first instance were also the objects that the monkeys tended to look at the longest (Pearson's r =.62, P =.013).

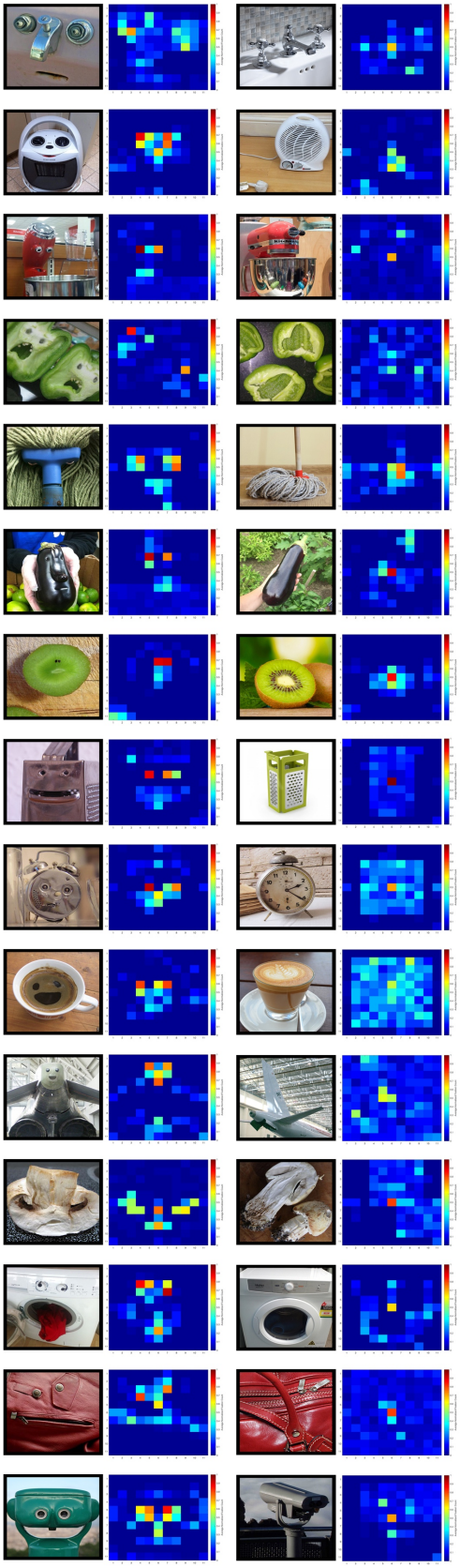

Figure S2. Comparison between content-matched stimuli (average normalized fixation frequencies). Related to Figure 3.

The fixation maps for each matched object pair averaged across all five subjects. Two columns on the left = the Illusory Face stimuli and the corresponding fixation maps. Two columns of the right = Nonface Object stimuli and the corresponding fixation maps.

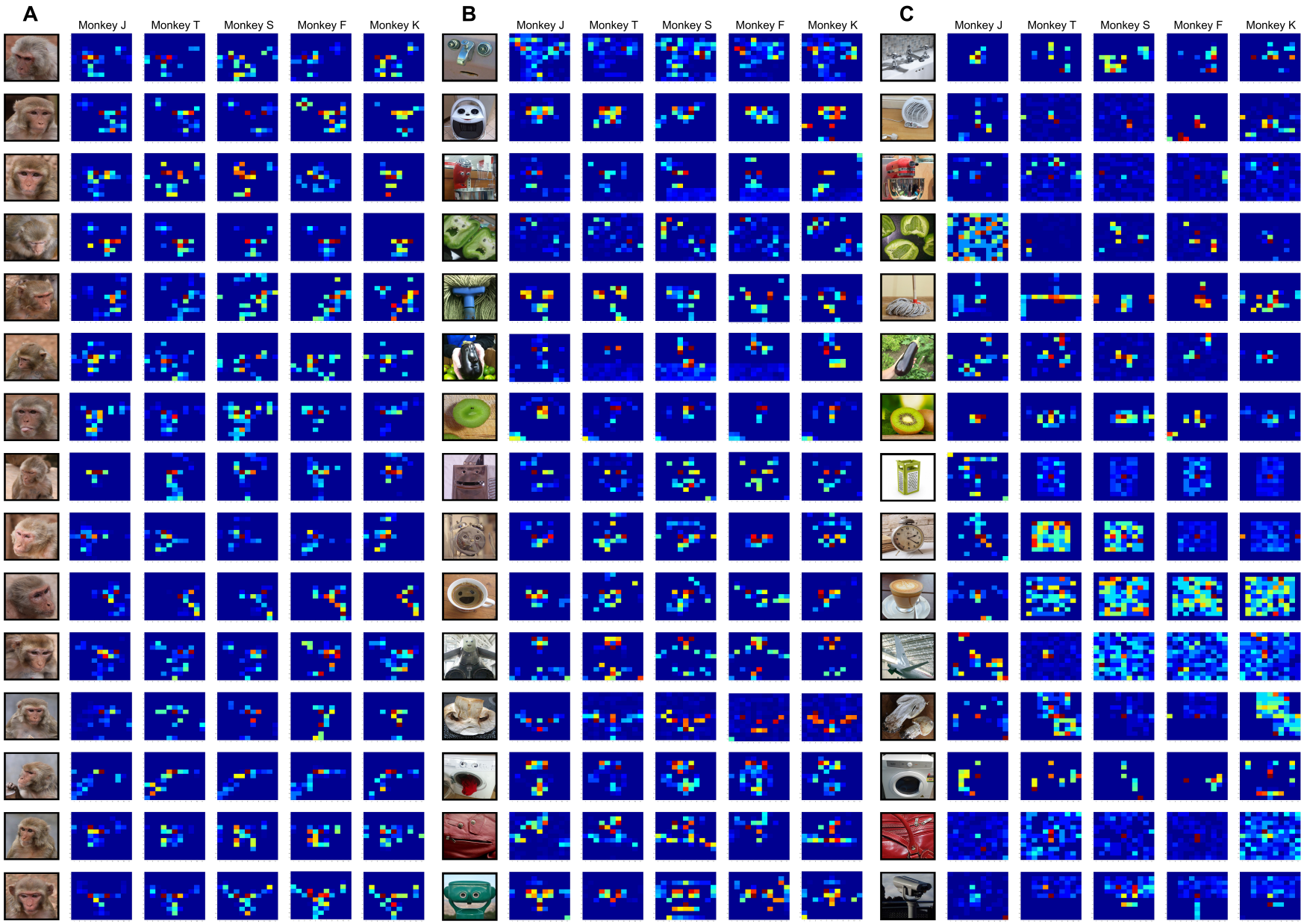

Figure S3. All experimental stimuli with individual subject fixation maps. Related to Figure 3.

(**A**) Rows represent 15 Monkey Face stimuli while the columns represent the fixation density maps from 5 subjects. (**B**) Rows represent 15 Illusory Face stimuli while the columns represent the fixation density maps from 5 subjects. (**C**) Rows represent 15 Nonface Object stimuli (matched for object content) while the columns represent the fixation density maps from 5 subjects.